

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
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PCT

WRITTEN OPINION

(PCT Rule 66)

Applicant's or agent's file reference 010454WO		Date of Mailing (day/month/year) 20 AUG 2003
International application No. PCT/US02/33928		REPLY DUE within 2 months/days from the above date of mailing
International filing date (day/month/year) 16 October 2002 (16.10.2002)	Priority date (day/month/year) 18 October 2001 (18.10.2001)	
International Patent Classification (IPC) or both national classification and IPC IPC(7): H04L 11/00; H04B 7/216; H04B 1/69 and US Cl.: 370/206-210, 335, 342; 375/146-147		
Applicant QUALCOMM INCORPORATED		

<p>1. This written opinion is the <u>first</u> (first, etc.) drawn by this International Preliminary Examining Authority.</p> <p>2. This opinion contains indications relating to the following items:</p> <ul style="list-style-type: none"> I. <input checked="" type="checkbox"/> Basis of the opinion II. <input type="checkbox"/> Priority III. <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV. <input type="checkbox"/> Lack of unity of invention V. <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2 (a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI. <input type="checkbox"/> Certain documents cited VII. <input type="checkbox"/> Certain defects in the international application VIII. <input type="checkbox"/> Certain observations on the international application <p>3. The applicant is hereby invited to reply to this opinion.</p> <p>When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension. See rule 66.2(d).</p> <p>How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.</p> <p>Also For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis. For an informal communication with the examiner, see Rule 66.6.</p> <p>If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.</p> <p>4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: <u>18 February 2004 (18.02.2004)</u></p>	
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer Steven H.D. Nguyen Telephone No. (703) 305-4700

Form PCT/IPEA/408 (cover sheet) (July 1998)

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I. Basis of the opinion

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☒ the description:
 pages 1-25 _____, as originally filed
 pages NONE _____, filed with the demand
 pages NONE _____, filed with the letter of _____
- ☒ the claims:
 pages 26-33 _____, as originally filed
 pages NONE _____, as amended (together with any statement) under Article 19
 pages NONE _____, filed with the demand
 pages NONE _____, filed with the letter of _____
- ☒ the drawings:
 pages 1-8 _____, as originally filed
 pages NONE _____, filed with the demand
 pages NONE _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages NONE _____, as originally filed
 pages NONE _____, filed with the demand
 pages NONE _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages NONE _____
- ☐ the claims, Nos. NONE _____
- ☐ the drawings, sheets-fig NONE _____

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

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V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO
Inventive Step (IS)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO
Industrial Applicability (IA)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO

2. CITATIONS AND EXPLANATIONS

Claims 1, 4-18, 20-21, 23, 25-28, 35-36, 38-42 and 44-48 lack novelty under PCT Article 33(2) as being anticipated by Abeta (EP 1128592 A).

Abeta discloses a system for transmitting a coded data stream for providing a stream of data symbols to a spreader for spreading the data symbol with a spreading code and providing the spread data to IFFT to generate an OFDM symbols and scaling the OFDM symbols with a gain for transmitting to the receiver in order to recover the data stream (See Figs 2-4, 18 and 21 and Page 1, lines 7-13, page 6, lines 45 to page 8, lines 57, page 10, lines 45 to page 11, lines 11).

Claims 2-3, 19, 22, 24, 31-34, 37 and 43 lack an inventive step under PCT Article 33(3) as being obvious over Abeta in view of Yano (USP 5559790). Abeta fails to disclose the function such as the scaled OFDM symbols is covered by another code and appending a cyclic prefix to the symbol and adjusting the transmission power. In the same field of endeavor, Yano discloses a system for covering the encoded data with a cover code and adjusting the transmission power before transmitting the data (See Col. 1, lines 9-14, col. 2, lines 12 to col. 4, lines 19; col. 7, lines 18 to col. 8, line 50 and Fig 1-2 and 4). Therefore, it would have been obvious to one of ordinary skill in the art to apply the teach of Yano into Abeta's system.

Claims 29-30 lack an inventive step under PCT Article 33(3) as being obvious over Abeta in view of Helard (WO 01/20840). Abeta fails to disclose the despreading coefficients are derived based in part of weights of the estimated channel response based on pilot signal. Helard discloses the despreading coefficients are derived based in part of weights of the estimated channel response based on pilot signal (See Abstract). Therefore, it would have been obvious to one of ordinary skill in the art to apply the teaching of Helard into Abeta's system.

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

TIME LIMIT:

The time limit set for response to a Written Opinion may not be extended. 37 CFR 1.484(d). Any response received after the expiration of the time limit set in the Written Opinion will not be considered in preparing the International Preliminary Examination Report.

V.1. Reasoned Statements:

The opinion as to Novelty was positive (Yes) with respect to claims 2-3, 19, 22, 24, 29-34, 37 and 43

The opinion as to Novelty was negative (No) with respect to claims 1, 4-18, 20-21, 23, 25-28, 35-36, 38-42 and 44-48

The opinion as to Inventive Step was positive (Yes) with respect to claims NONE

The opinion as to Inventive Step was negative (NO) with respect to claims 1-48

The opinion as to Industrial Applicability was positive (YES) with respect to claims 1-48

The opinion as to Industrial Applicability was negative (NO) with respect to claims NONE